



REMR MATERIAL DATA SHEET CM-SE-1.23

CONCRETE SEALER: MASTERSEAL GP

(Supersedes previously issued CM-SE-1.23)

1. NAME

Masterseal GP

2. MANUFACTURER

Master Builders, Inc.
23700 Chagrin Boulevard
Cleveland, OH 44122
Telephone: (216) 831-5500

3. DESCRIPTION

Masterseal GP is a high-quality, VOC compliant long-established 50-percent solids epoxy formulation for sealing concrete surfaces to prevent deterioration such as spalling, scaling, cracking, and leaching. It effectively keeps out moisture that carries deicing or marine chlorides which cause spall generating reinforcing bar corrosion, rainborne acids that attack cement, and moisture that causes cracking, leaching, and scaling from freeze-thaw cycles.

4. USES & LIMITATIONS

Uses: Typical applications include pier caps, bridge decks, highways, median barriers, industrial plants, and parking garages. Masterseal GP protects concrete against effects of waterborne deteriorants. It seals pores; strengthens weak, porous concrete surfaces; and cures on clean, dry surfaces as low as 40° F. It is economical.

Limitations: Masterseal GP should be stored in tightly sealed containers in a dry location and at normal room temperatures (65° to 85° F). Some epoxy materials can crystallize during storage; the tendency to do so is affected by conditions of storage, composition, and other factors. If abnormal conditions cannot be avoided, Master Builders should be consulted. Component B may darken after prolonged storage. However, darkening does not affect any properties.

5. MANUFACTURER'S TECHNICAL DATA

Properties (@ 75° ± 2° F)

Mix ratio:	1:1 by volume (Part A: Part B)
Total solids:	50% minimum
Color:	Clear amber
Viscosity (mixed):	15-40 centipoises
Shelf life:	2 years (stored at maximum temperature of 85° F)
Pot life:	2 hr
Tack free (gal):	3-4 hr
Coverage:	100-150 sq ft/gal, depending upon surface conditions and temperature
Packaging:	5- and 55-gal drum
Reduction of water absorption into concrete	91% min (NCHRP Study 12-19A)

Reduction of water absorption
in concrete exposure test 94% min (NCHRP Study 12-19A)

6. MANUFACTURER'S GUIDANCE FOR APPLICATION

Surface preparation: Surface must be clean and sound. All surface dirt, laitance, grease, curing compounds, weak sections, and all other foreign matter should be removed by sandblasting, mechanical abrasion, cleaning solutions, or acid etching. Clean sound concrete may be treated as is or may be applied on new concrete 24 hr or more after completion of moisture cure.

Mixing: Thorough and complete mixing is vital for uniform curing and ultimate properties after cure. Temperature of Masterseal GP must be above 50° F for mixing. Mix parts A and B at 1:1 by volume for 3 min using a Jiffy mixer (or equivalent) powered by low-speed (400 to 650 rpm) electric drill. If Jiffy mixer is not available, mix vigorously and thoroughly with paint stirrer or by other means.

Application: Apply Masterseal GP at a surface temperature of 40° F or above with squeegee, roller, or spraying equipment to clean, dry surface. For best results, apply two coats. To provide skid and wear resistance, broadcast 20 mesh silica sand over the final coat at 1 to 1-1/2 lb/sq yd.

Masterseal GP contains epoxy resin and organic amines. Prolonged or repeated contact may cause eye irritation and other allergic responses such as skin irritation or dermatitis. Avoid contact, wash skin or eyes. In case of contact, wash skin with brown soap and water. Flush eyes immediately with water and see a doctor. Masterseal GP contains flammable solvents. Keep open flame and cigarettes away when using or mixing and if used indoors, provide adequate ventilation. Use soft-side goggles, protective clothing, rubber gloves, and barrier

creams.

7. CORPS OF ENGINEERS' EVALUATION

Physical and mechanical properties:

Percent solid
(ASTM D 1644, Method A): 41.1%

Percent water absorption
(ambient temperature) (ASTM C 642):

1 day	1.81%
2 day	2.52%
4 day	3.14%
7 day	3.76%

Ratio of percent water absorption for treated to nontreated specimen (2-day submersion): 54.0%

9. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of sealant activities involving potentially hazardous and toxic chemical substances. Manufacturer's recommendations to protect occupational health and environmental quality should be carefully followed. Material safety data sheets should be obtained from the manufacturers of such materials. In cases where the effects of a chemical substance on occupational health or environmental quality are unknown, chemical substances should be treated as potentially hazardous toxic materials.

9. AVAILABILITY AND COSTS

Information concerning the availability and cost of Masterseal GP can be obtained by writing to the address given in item 2 or calling (216) 831-5500.

10. TECHNICAL SERVICE

Technical service is available from the manufacturer's technical service department. Call (216) 831-5500.